

## MYGALOMORPH SPIDERS IN THE BARYCHELIDAE (ARANEAE) FROM COSTA RICA<sup>1</sup>

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### ABSTRACT

Two species of Barychelidae, *Psalistops venadensis* and *Trichopelma laselva*, are described from Costa Rica. These are the first records of this mygalomorph family from this country. Both species were associated with tropical wet forests.

### INTRODUCTION

Among the mygalomorph families, the Theraphosidae are particularly diverse in Costa Rica with more than 30 species, including arboreal, diggers, forest-dwellers, species associated with pastures, many lowland, and one-high-altitude species (Valerio 1979, 1980). The Dipluridae are represented by three species and the Ctenizidae by one (Zúñiga 1980). The remaining families have no published records, except for one paratropidid collected in 1930 and erroneously identified as *Anisaspis tuberculatus* (a Caribbean species) by Reimoser (1940). I examined the specimen and it is an immature *Paratropis* sp.

In this paper I record the presence of two species in the Barychelidae, a group previously known, in the New World, only from South America and some Caribbean islands. Additional specimens have been collected in Panama, Honduras, Guatemala, and Mexico (W. Gertsch and V. Roth personal communications).

Although some theraphosids are locally very abundant, long years of collecting have yielded only three specimens of these barychelids and I think they are relevant enough to merit taxonomic treatment.

### FAMILY BARYCHELIDAE SIMON

The species from Costa Rica possess a conspicuous rastellum on the anterior face of the basal cheliceral segment, minute PME, eye tubercule low and scopulation of legs as follows: entire and thin pads on palpal tarsus and metatarsi I and II, thin pad divided by a band of short setae on tarsus III. Scopulae absent on tarsus IV and metatarsi III and IV. The labium bears some 25 cuspules on the anterior half of its length (Figs. 7-8).

<sup>1</sup>Supported by a grant from Vicerrectoría de Investigación, Universidad de Costa Rica.



Map 1.—Map of Costa Rica indicating type localities for *Psalistops venadensis* (triangle) and *Trichopelma laselva* (circle). Shaded area indicates tropical wet formations.

### Genus *Psalistops* Simon

*Psalistops* Simon 1889, Simon 1892, Waterhouse 1902, Mello-Leitão 1923, Petrunkevitch 1928.

Easily distinguished from *Trichopelma* by the absence of a clear annular band on tarsus IV. Lateral spinnerets with apical segment short and conical. Three species are known from Venezuela, three from the Caribbean islands and two from Brazil. (Bonnet 1949, Brignoli 1983).

### *Psalistops venadensis*, new species

Figs. 1-3, 6, 7, 10, 11; Map 1

**Type.**—Female from El venado, San Carlos, Alajuela Province (10° 33' N, 84° 24' W) collected by C. E. Valerio, deposited in the Museo de Zoología (Universidad de Costa Rica). An additional specimen (immature female) from Tortuguero, Limón Province 10° 29' N, 83° 30' W) was examined and deposited in the MZUCR.

**Diagnosis.**—Closely related to the Venezuelan *P. zonatus* Simon, characterized by the presence of two strong spines ventrally on the base of tibia III in addition

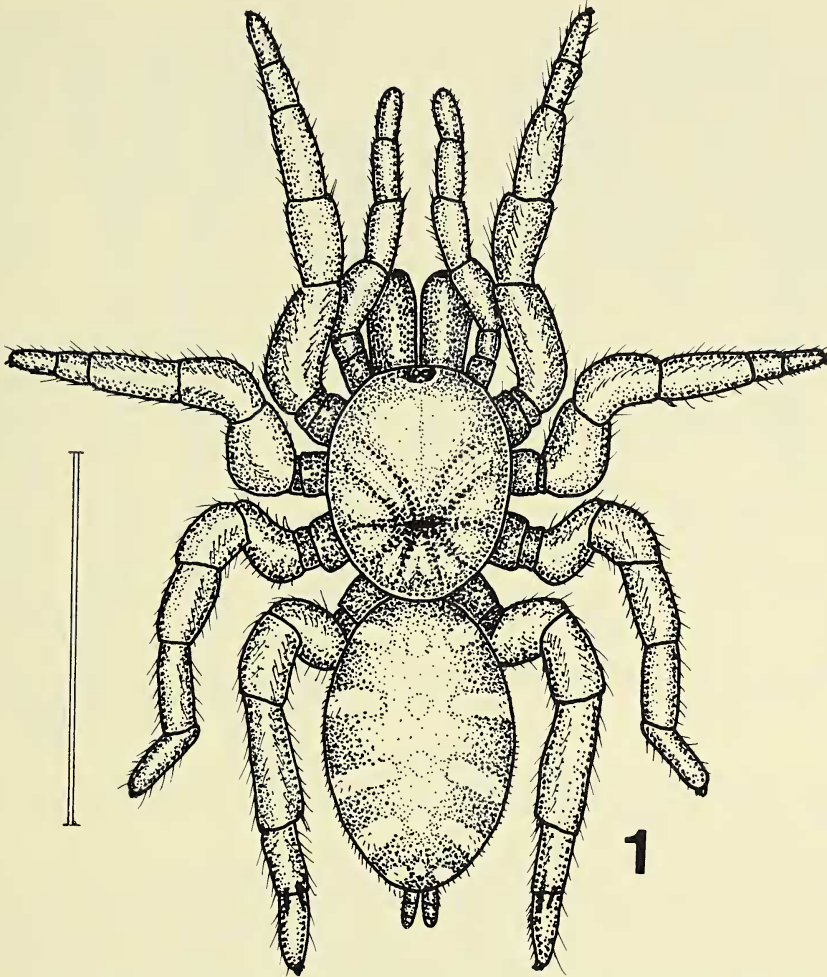
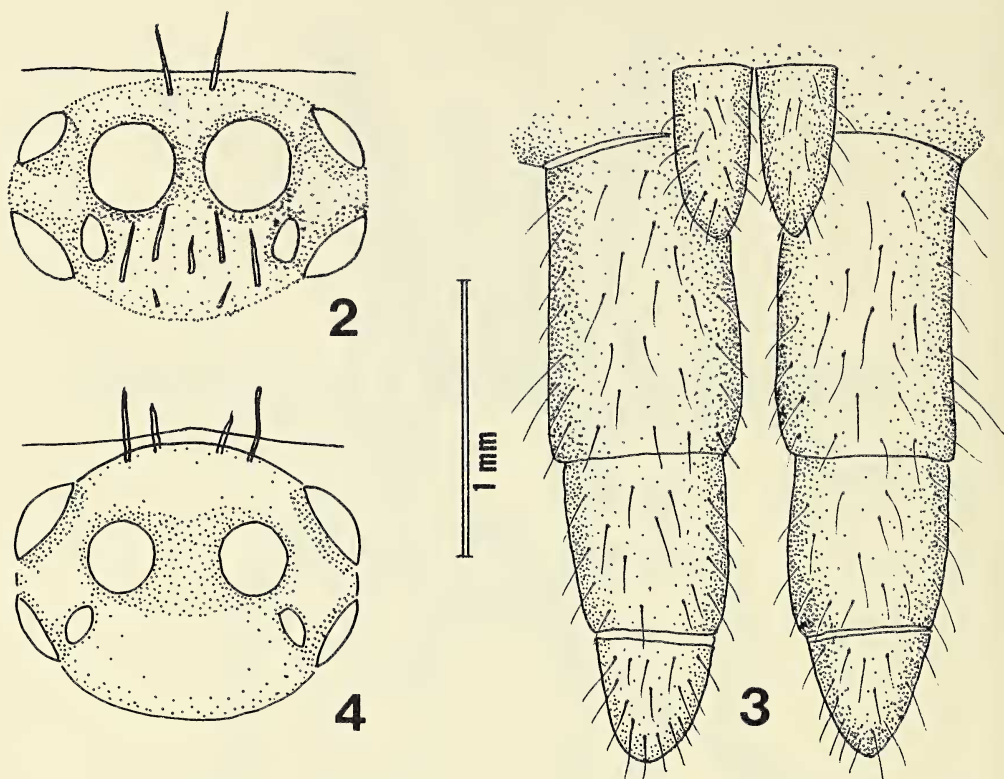


Fig. 1.—*Psalistops venadensis*, female, dorsal view. Scale line 10 mm.

to two apical ones (Figs. 5-6), larger size (21 mm total length), dark coloration and size of spermathecae (1.5 mm wide). Separated from the genotype *P. melanopygius* Simon by the shape of spermathecae (head divided into large protuberances vs. smooth, see Fig. 10). Note: the third Venezuelan species is *P. tigrinus* Simon, but the specimen labeled as type in the MNHN in Paris, number 10716 - 3.244, is a small prodidomid rather than a barychelid (the type must be lost or misplaced). It can be separated from *Trichopelma laselva* n. sp. (besides the generic characters) by its large AME (Fig. 2), the presence of three denticles on tarsal paired claws (Fig. 11), considerably less cuspules on maxillary segments and light body coloration.

**Female.**—Basal cheliceral segment with conspicuous rastellum. Sternum, labium, maxillae and ventral side of coxae covered with short spines. Maxillae with some 30 cuspules near medial border. Labium with some 25 cuspules covering anterior half. Carapace covered with fine pubescence. All legs covered dorsally with setae, all tarsi with few capitated hairs dorsally. Metatarsi I and II with one strong distal spine on ventral side, metatarsi III and IV with two on ventral side and metatarsi III alone with two such spines dorsally. Tibia III with



Figs. 2-4.—Ocular area (dorsal view) and spinnerets (ventral view): 2-3, *Psalistops venadensis*; 4, *Trichopelma laselva*. Scale line 1 mm.

only two strong spines on ventral side, located distally (Fig. 6). Tarsal claws with series of three denticles (Fig. 11). Ocular area dark, prominent, with conspicuous pair of setae anteriorly near clypeus, AME twice as large as ALE (Fig. 2). Thoracic furrow transverse. General coloration light tan with ocular area black, longitudinal series of five clear patches dorsally on abdomen and matching transversal clear bands on sides (Fig. 1). Posterior lateral spinnerets long with small triangular apical segment (Fig. 5). Measurements in mm: carapace 6.3, sternum 2.8, abdomen 8.0, palp 11.5, leg I 15.0, leg II 13.5, leg III 13.5, leg IV 20.0. Spermatheca 0.9 in width, divided in two capitated regions, covered by rounded spermathecal glands (Fig. 1).

**Male.**—Unknown.

**Distribution.**—Known from the Northern lowlands (Map 1).

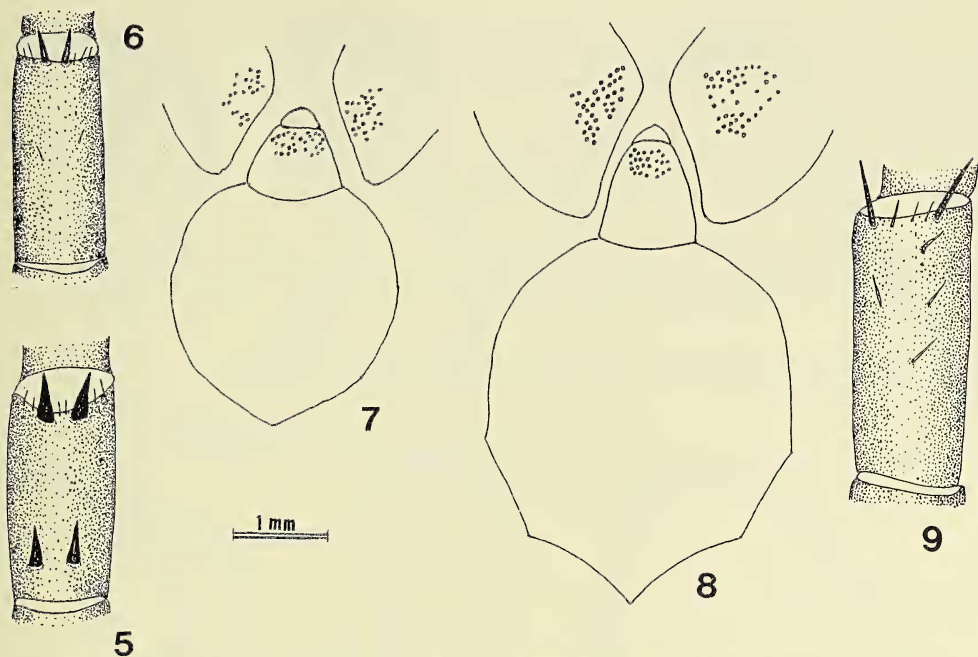
**Natural History.**—Both specimens were collected under forest litter in disturbed areas, in tropical wet formations.

### Genus *Trichopelma* Simon

*Trichopelma* Simon 1888, Simon 1889, Simon 1891, Mello-Leitão 1923.

This genus is characterized by the presence of an annular pale band (suture?) on tarsus IV (better seen from the sides and ventrally). One species is known from the Dominican Republic and two from Brazil.





Figs. 5-9.—Right tibia III (ventral view) and prosoma (ventral view): 5, *Psalistops zonatus*; 6-7, *Psalistops venadensis*; 8-9, *Trichopelma laselva*. Scale line 1 mm.

***Trichopelma laselva* new species**

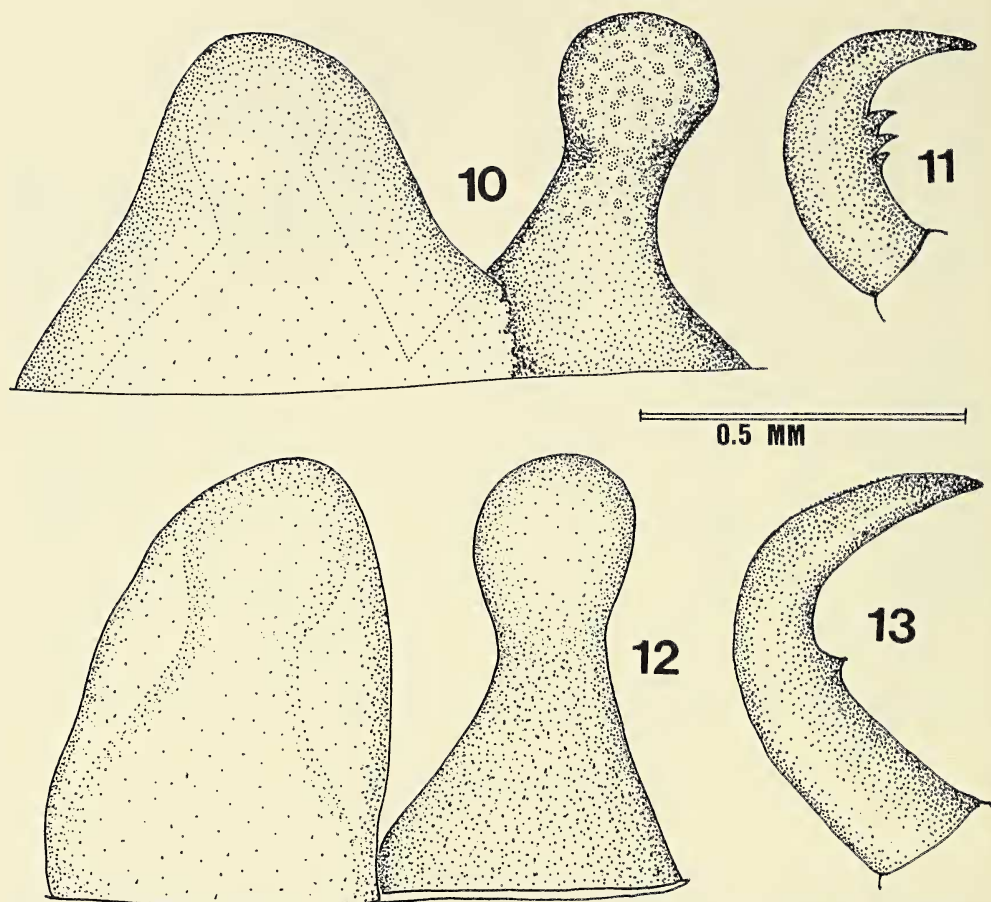
Figs. 4, 8, 9, 12, 13; Map 1

**Type.**—Female from Finca La Selva Station, near Puerto Viejo de Sarapiquí, Heredia Province (10° 25' N, 84° 01' W), collected by V. Roth, deposited in the American Museum of Natural History.

**Etymology.**—The name refers to the type locality.

**Diagnosis.**—This species shows the suture ring on tarsus IV characteristic of the genus. Valid comparisons cannot be made with its closest geographic neighbor, *T. nitida* Simon from the Caribbean, since it is known from a single male specimen and sizes and proportions vary considerably with sex. Taken into consideration that geographic ranges in mygalomorphs tend to be small (Valerio 1979) and that *T. nitida* is isolated in a Caribbean island, I think it is safe to consider this Costa Rican female a separate species.

**Female.**—Basal cheliceral segment with conspicuous rastellum. Sternum, labium and maxillae covered with long black setae. Maxillae with some 40 cuspules anteriorly near medial border. Labium with some 25 cuspules on anterior half (Fig. 8). Tarsi and metatarsi on all legs covered with spines. Tibia III with two slender spines ventrally near distal end (Fig. 9). Paired tarsal claw with one denticle (Fig. 13). Ocular area prominent, anterior eyes in strongly procurved line, AME smaller than ALE (Fig. 4). Thoracic furrow transverse. General coloration dark brown, with pattern of light transverse bands on abdomen, similar to that of *P. venadensis* (Fig. 1). Measurements in mm; carapace 9.0, sternum 3.5, abdomen 12.0, palp 12.0, leg I 21.0, leg II 22.0, leg III 19.0, leg IV 28.0. Spermathecae 0.9 in width, similar in shape to that of *P. venadensis* n. sp. (Fig. 12).



Figs. 10-13.—Spermathecae (dorsal view) and paired tarsal claw III: 10-11, *Psalistops venadensis*; 12-13, *Trichopelma laselva*. Scale line 0.5 mm.

**Male.**—Unknown.

**Distribution.**—Known only from the type locality (Map 1).

**Natural History.**—Collected in a densely forested area, in a tropical wet formation.

#### ACKNOWLEDGMENTS

I am indebted to R. Raven for a critical review of the manuscript and for sending me his unpublished keys for the mygalomorphs. I was able to study the collections of the Museum Natural d'Histoire Naturelle, the Zoologischen Museum Wien and the American Museum of Natural History, through the generosity of M. Vachon, J. Gruber and N. Platnick.

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*Manuscript received August 1985, revised January 1986.*